

What is Claimed Is:

- sub G3
1. A method in a host channel adapter, the method comprising:
first storing in a table, each access cycle by a retransmission manager, entries identifying
respective packets having been transmitted during the corresponding access cycle according to a
service protocol requiring an acknowledgement message receipt within a prescribed time interval
5 following transmission of the corresponding packet;
resetting an acknowledgment waiting bit for a selected one of the entries by an
acknowledgement manager in response to reception of an acknowledgment message identifying the
corresponding packet; and
transferring the entries having a determined absence of the reset stored acknowledgment
10 waiting bit upon expiration of the prescribed time interval to a transmit queue for retransmission.
 2. The method of claim 1, wherein the first storing step includes:
counting during each access cycle a number of the packets having been transmitted during the
corresponding access cycle according to the service protocol;
setting the acknowledgment waiting bit for each of the entries stored in the corresponding
5 access cycle; and
inserting the counted number into a number of packets field within the entry corresponding to
a first of the packets transmitted during the corresponding access cycle.
 3. The method of claim 2, further comprising determining the entries having the
determined absence by:
accessing the entry for the first of the packets transmitted during an access cycle having passed
the expiration of the prescribed time interval; and
5 determining whether the accessed entry includes a reset acknowledgment waiting bit.
 4. The method of claim 3, wherein the transferring step includes transferring the accessed
entry and selected subsequent entries based on the counted number stored in the accessed entry to the
transmit queue, independent of whether the selected subsequent entries have respective reset
acknowledgment waiting bits.

5. The method of claim 4, further comprising deleting the entries having passed beyond the expiration of the prescribed time interval.

6. The method of claim 2, wherein the transferring step includes identifying the entries for transfer based on the counted number stored in the entry for the first of the packets.

7. The method of claim 1, wherein said each access cycle is defined by a prescribed number of clock cycles.

8. A host channel adapter comprising:

5 a table configured for storing entries identifying respective packets having been transmitted according to a service protocol requiring an acknowledgment message receipt within a prescribed time interval following transmission of the corresponding packet, each entry including a packet identifier, and an acknowledgment waiting bit for identifying whether the corresponding acknowledgment message has been received;

a transmit queue configured for identifying packets to be transmitted;

10 an acknowledgment manager configured for resetting the acknowledgment waiting bit for a selected one of the entries identifying reception of an acknowledgment message for the corresponding packet; and

15 a retransmission manager configured for storing in the table, each access cycle, the entries identifying the respective packets having been transmitted during the corresponding access cycle, the retransmission manager transferring the entries having a determined absence of the reset acknowledgment waiting bit upon expiration of the prescribed time interval from the table to the transmit queue.

9. The apparatus of claim 8, further comprising a counter configured for counting during each access cycle a number of the packets having been transmitted during the corresponding access cycle according to the service protocol, the retransmission manager inserting the counted number into a number of packets field within the entry corresponding to a first of the packets transmitted during the
5 corresponding access cycle.

10. The apparatus of claim 9, wherein the retransmission manager accesses the entry for the first of the packets having been transmitted during an access cycle having passed the expiration of the prescribed interval, the retransmission manager transferring the accessed entry and selected

